

**REMARKS/ARGUMENTS**

The present Amendment is in response to the Final Office Action having a mailing date of January 25, 2007. Claims 1-44 are pending in the present Application. Claims 8-10 and 12-44 have been withdrawn from consideration. Applicant has amended claim 45. Consequently, claims 1-7, 11, and 45-46 remain pending in the present Application.

This application is under Final Rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the Amendment to clarify issues upon appeal.

Applicant has amended claim 45 to add a period and delete the semicolon at the end of the sentence. Because this amendment clearly requires only a cursory review, the amendment should be entered. See MPEP 714.13 (citing "an amendment that merely cancels claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner,"). Thus, Applicant respectfully requests that the Examiner enter the Amendment. In addition, this amendment is seen by Applicant as broadening or cosmetic, and as such, is not subject to the prosecution history estoppel imposed by Festo. For the record, Applicant points out that the Supreme Court in Festo noted that a cosmetic amendment would not narrow the patent's scope and thus would not raise the estoppel bar.

Applicant respectfully reiterates Applicant's traversal of the restriction requirement, particularly with respect to the Examiner's conclusions regarding distinct species. As can be seen from claims 1, 8, and 27, each of these claims includes at least a pinned layer, a

nonmagnetic spacer layer, and a free layer. Independent claims 8 and 27 simply recite additional layers and currently have slightly different limitations on the spacer and free layers. Consequently, Applicant respectfully reiterates Applicant's traversal of the restriction requirement.

In the above-identified Office Action, the Examiner rejected claims 1-2 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6381,106 (Pinarbasi). In so doing, the Examiner cited col. 6 and FIG. 13 of Pinarbasi.

Applicant respectfully disagrees with the Examiner's rejection. Claim 1 recites a magnetic element including a pinned layer, a spacer layer, and a free layer. The free layer has a low saturation magnetization and may include doped ferromagnetic materials and/or a multilayer. The doped ferromagnetic material(s) include ferromagnetic material(s) that are diluted with at least one nonmagnetic material and/or ferrimagnetically doped. Specific dopants are also recited in claim 1. In addition, claim 1 recites that the magnetic element is configured to allow the free layer magnetization to be switched due to spin transfer when a write current is passed through the magnetic element. This corresponds to a particular configuration, such as lateral dimensions that are small and preferably less than two hundred nanometers. Specification, paragraph 27.

Pinarbasi fails to teach or suggest the magnetic element recited in claim 1. More specifically, Pinarbasi fails to teach or suggest the recited material(s) in the free layer *in combination with* the magnetic element being configured to allow the free layer magnetization to be switched due to spin transfer when a write current is passed through the magnetic element. Pinarbasi describes a magnetic sensor that is responsive to an

external magnetic field. Pinarbasi, col. 4, lines 11-12. See also, Pinarbasi, col. 1, lines 12-32. Consequently, the magnetic sensor of Pinarbasi is not configured such that the magnetization of the magnetic sensor is switched due to spin transfer when a write current is passed through the magnetic element. Stated differently, Applicant can find no mention in Pinarbasi of the recited materials in conjunction with the free layer being switched utilizing a write current driven through the magnetic element. Although Pinarbasi does describe a current being driven through the magnetic element, this current is a sense current and is thus not designed to write to the magnetic element. Instead, the sense current is driven through the sensor in order to *read* the change in resistance of the magnetic element. Pinarbasi, col. 4, lines 11-16. Switching the free layer using a read current would interfere with proper operation of the sensor of Pinarbasi because an accurate reading of the magnetic state of the magnetic element of Pinarbasi would not be obtained.

Pinarbasi also describes aspects of the sensor, such as the composition of the free layer. Pinarbasi, col. 6, lines 15-67. However, Applicant can find no mention in Pinarbasi of the recited materials in conjunction with the free layer being switched utilizing a write current driven through the magnetic element. Moreover, Applicant has found no mention in the cited portion of Pinarbasi of specific lateral dimensions that might indicate that the structures of Pinarbasi may have their free layer magnetization changed due to a write current driven through the magnetic element. Pinarbasi thus fails to teach or suggest the recited material(s) in the free layer *in combination with* the magnetic element being configured to allow the free layer magnetization to be switched due to spin transfer when a write current is passed through the magnetic element. Consequently, Pinarbasi

fails to teach or suggest the magnetic element recited in claim 1. Accordingly, Applicant respectfully submits that claim 1 is allowable over Pinarbasi.

Claim 2 depends upon independent claim 1. Consequently, the arguments herein apply with full force to claim 2. Accordingly, Applicant respectfully submits that claim 2 is allowable over Pinarbasi.

The Examiner also rejected claims 1-7, 11, and 45-46 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6781872 (Saito). In so doing, the Examiner cited FIGS. 12-16 and columns 15-16 of Saito.

Applicant respectfully disagrees with the Examiner's rejection. Saito fails to teach or suggest the recited material(s) in the free layer in combination with the magnetic element being configured to allow the free layer magnetization to be switched due to spin transfer when a write current is passed through the magnetic element.

Saito does describe a magnetic structure for use in magnetic memories. Saito describes magnetic elements having specific materials, as well as specific thickness ranges. See, for example, Saito, col. 15, lines 7-30. However, Applicant can find no mention in the cited portion of Saito of the magnetic element being configured such that the free layer magnetization is changed due to a write current driven through the magnetic element *in combination with* the recited materials used in the free layer. Further, Applicant has found no mention in the cited portion of Saito of specific lateral dimensions that might indicate that the structures of Saito may have their free layer magnetization changed due to a write current driven through the magnetic element. Saito, therefore, fails to teach or suggest the recited material(s) in the free layer in combination with the magnetic element being configured to allow the free layer magnetization to be

switched due to spin transfer when a write current is passed through the magnetic element. Consequently, Saito fails to teach or suggest the magnetic element recited in claim 1. Accordingly, Applicant respectfully submits that claim 1 is allowable over the cited references.

Claims 2-7, 11, and 45-46 depend upon claim 1. Consequently, the arguments herein apply with full force to claims 2-7 and 11. Accordingly, Applicant respectfully submits that claims 2-7 and 11 are allowable over the cited references.

Furthermore, claim 6 specifically recites the existence of a high spin polarization layer between the free and spacer layers. Although the Examiner cited cols. 15-16, Applicant has found no mention in the cited portion of Saito that a high polarization layer between the spacer and free layer. Accordingly, Applicant respectfully submits that claim 6 is separately allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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Date

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